



WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
601 57th Street, SE
Charleston, WV 25304
Phone: (304) 926-0475 • www.dep.wv.gov/daq

**APPLICATION FOR GENERAL
PERMIT REGISTRATION**
CONSTRUCT, MODIFY, RELOCATE OR
ADMINISTRATIVELY UPDATE
A STATIONARY SOURCE OF AIR POLLUTANTS

☒ CONSTRUCTION ☐ MODIFICATION ☐ RELOCATION ☐ CLASS I ADMINISTRATIVE UPDATE
☐ CLASS II ADMINISTRATIVE UPDATE

CHECK WHICH TYPE OF GENERAL PERMIT REGISTRATION YOU ARE APPLYING FOR:

- | | |
|---|--|
| <input type="checkbox"/> G10-D – Coal Preparation and Handling | <input type="checkbox"/> G40-C – Nonmetallic Minerals Processing |
| <input type="checkbox"/> G20-B – Hot Mix Asphalt | <input checked="" type="checkbox"/> G50-B – Concrete Batch |
| <input type="checkbox"/> G30-D – Natural Gas Compressor Stations | <input type="checkbox"/> G60-C – Class II Emergency Generator |
| <input type="checkbox"/> G33-A – Spark Ignition Internal Combustion Engines | <input type="checkbox"/> G65-C – Class I Emergency Generator |
| <input type="checkbox"/> G35-A – Natural Gas Compressor Stations (Flare/Glycol Dehydration Unit) | <input type="checkbox"/> G70-A – Class II Oil and Natural Gas Production Facility |

SECTION I. GENERAL INFORMATION

- | | | |
|--|--|--|
| 1. Name of applicant (as registered with the WV Secretary of State's Office):
Patriot Ready Mixed Concrete, LLC | | 2. Federal Employer ID No. (FEIN):
22-3931872 |
| 3. Applicant's mailing address:
PO Box 151777
Alexandria, VA 22315 | | 4. Applicant's physical address:
6202-A Old Franconia Road
Alexandria VA 22310 |
| 5. If applicant is a subsidiary corporation, please provide the name of parent corporation: | | |
| 6. WV BUSINESS REGISTRATION. Is the applicant a resident of the State of West Virginia? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
⇒ IF YES, provide a copy of the Certificate of Incorporation/ Organization / Limited Partnership (one page) including any name change amendments or other Business Registration Certificate as Attachment A.
⇒ IF NO, provide a copy of the Certificate of Authority / Authority of LLC / Registration (one page) including any name change amendments or other Business Certificate as Attachment A. | | |

SECTION II. FACILITY INFORMATION

- | | | | |
|--|--|-----|---|
| 7. Type of plant or facility (stationary source) to be constructed, modified, relocated or administratively updated (e.g., coal preparation plant, primary crusher, etc.):
Portable Concrete Batch Plant | 8a. Standard Industrial Classification
Classification (SIC) code:
3273 | AND | 8b. North American Industry System (NAICS) code:
327320 |
| 9. DAQ Plant ID No. (for existing facilities only):

_____ | 10. List all current 45CSR13 and other General Permit numbers associated with this process (for existing facilities only):

_____ | | |

A: PRIMARY OPERATING SITE INFORMATION

<p>11A. Facility name of primary operating site:</p> <p><u>Project Independence</u></p> <p><u>Tabler Station</u></p>	<p>12A. Address of primary operating site:</p> <p>Mailing: <u>396 Development Drive</u> Physical: <u>Same</u></p> <p><u>Inwood, WV 25428</u></p>
<p>13A. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>⇒ IF YES, please explain: <u>We are contracted by the site manager to provide and operate a portable concrete batch plant</u></p> <p>⇒ IF NO, YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE.</p>	
<p>14A. ⇒ For Modifications or Administrative Updates at an existing facility, please provide directions to the present location of the facility from the nearest state road;</p> <p>⇒ For Construction or Relocation permits, please provide directions to the proposed new site location from the nearest state road. Include a MAP as Attachment F.</p> <p><u>From Interstate 81, take exit 8 to east bound Tabler Station Rd. Turn Left at Development Drive to the project entrance.</u></p>	
<p>15A. Nearest city or town:</p> <p><u>Martinsburg</u></p>	<p>16A. County:</p> <p><u>Berkeley</u></p>
<p>17A. UTM Coordinates:</p> <p>Northing (KM): <u>4365934</u></p> <p>Easting (KM): <u>757606</u></p> <p>Zone: <u>17S</u></p>	
<p>18A. Briefly describe the proposed new operation or change (s) to the facility:</p> <p><u>Portable concrete batch plant operation</u></p>	
<p>19A. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits):</p> <p>Latitude: <u>39.40447</u></p> <p>Longitude: <u>78.00821</u></p>	

B: 1ST ALTERNATE OPERATING SITE INFORMATION (only available for G20, G40, & G50 General Permits)

<p>11B. Name of 1st alternate operating site:</p> <p>_____</p> <p>_____</p>	<p>12B. Address of 1st alternate operating site:</p> <p>Mailing: _____ Physical: _____</p> <p>_____</p>
<p>13B. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? <input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>⇒ IF YES, please explain: _____</p> <p>⇒ IF NO, YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE.</p>	

14B. ⇨ For Modifications or Administrative Updates at an existing facility, please provide directions to the present location of the facility from the nearest state road; ⇨ For Construction or Relocation permits, please provide directions to the proposed new site location from the nearest state road. Include a MAP as Attachment F . 		
15B. Nearest city or town:	16B. County:	17B. UTM Coordinates: Northing (KM): _____ Easting (KM): _____ Zone: _____
18B. Briefly describe the proposed new operation or change (s) to the facility:		19B. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits): Latitude: _____ Longitude: _____

C: 2ND ALTERNATE OPERATING SITE INFORMATION (only available for G20, G40, & G50 General Permits):

11C. Name of 2 nd alternate operating site:	12C. Address of 2 nd alternate operating site: Mailing: _____ Physical: _____	
13C. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? <input type="checkbox"/> YES <input type="checkbox"/> NO ⇨ IF YES, please explain: _____ ⇨ IF NO, YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE.		
14C. ⇨ For Modifications or Administrative Updates at an existing facility, please provide directions to the present location of the facility from the nearest state road; ⇨ For Construction or Relocation permits, please provide directions to the proposed new site location from the nearest state road. Include a MAP as Attachment F . 		
15C. Nearest city or town:	16C. County:	17C. UTM Coordinates: Northing (KM): _____ Easting (KM): _____ Zone: _____
18C. Briefly describe the proposed new operation or change (s) to the facility:		19C. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits): Latitude: _____ Longitude: _____

20. Provide the date of anticipated installation or change: <u>11 / 15 / 2016</u> <input type="checkbox"/> If this is an After-The-Fact permit application, provide the date upon which the proposed change did happen: : <u> / / </u>	21. Date of anticipated Start-up if registration is granted: <u>12 / 01 / 2016</u>
22. Provide maximum projected Operating Schedule of activity/activities outlined in this application if other than 8760 hours/year. (Note: anything other than 24/7/52 may result in a restriction to the facility's operation). Hours per day <u>8</u> Days per week <u>5</u> Weeks per year <u>50</u> Percentage of operation <u>85</u>	

SECTION III. ATTACHMENTS AND SUPPORTING DOCUMENTS

23. Include a check payable to WVDEP – Division of Air Quality with the appropriate application fee (per 45CSR22 and 45CSR13).
24. Include a Table of Contents as the first page of your application package.
All of the required forms and additional information can be found under the Permitting Section (General Permits) of DAQ's website, or requested by phone.
25. Please check all attachments included with this permit application. Please refer to the appropriate reference document for an explanation of the attachments listed below. <div style="margin-top: 10px;"> <input checked="" type="checkbox"/> ATTACHMENT A : CURRENT BUSINESS CERTIFICATE <input checked="" type="checkbox"/> ATTACHMENT B: PROCESS DESCRIPTION <input checked="" type="checkbox"/> ATTACHMENT C: DESCRIPTION OF FUGITIVE EMISSIONS <input checked="" type="checkbox"/> ATTACHMENT D: PROCESS FLOW DIAGRAM <input checked="" type="checkbox"/> ATTACHMENT E: PLOT PLAN <input checked="" type="checkbox"/> ATTACHMENT F: AREA MAP <input checked="" type="checkbox"/> ATTACHMENT G: EQUIPMENT DATA SHEETS AND REGISTRATION SECTION APPLICABILITY FORM <input checked="" type="checkbox"/> ATTACHMENT H: AIR POLLUTION CONTROL DEVICE SHEETS <input checked="" type="checkbox"/> ATTACHMENT I: EMISSIONS CALCULATIONS <input checked="" type="checkbox"/> ATTACHMENT J: CLASS I LEGAL ADVERTISEMENT <input checked="" type="checkbox"/> ATTACHMENT K: ELECTRONIC SUBMITTAL <input checked="" type="checkbox"/> ATTACHMENT L: GENERAL PERMIT REGISTRATION APPLICATION FEE <input type="checkbox"/> ATTACHMENT M: SITING CRITERIA WAIVER <input checked="" type="checkbox"/> ATTACHMENT N: MATERIAL SAFETY DATA SHEETS (MSDS) <input checked="" type="checkbox"/> ATTACHMENT O: EMISSIONS SUMMARY SHEETS <input checked="" type="checkbox"/> OTHER SUPPORTING DOCUMENTATION NOT DESCRIBED ABOVE (Equipment Drawings, Aggregation Discussion, etc.) </div>
Please mail an original and two copies of the complete General Permit Registration Application with the signature(s) to the DAQ Permitting Section, at the address shown on the front page of this application. Please DO NOT fax permit applications. For questions regarding applications or West Virginia Air Pollution Rules and Regulations, please refer to the website shown on the front page of the application or call the phone number also provided on the front page of the application.

SECTION IV. CERTIFICATION OF INFORMATION

This General Permit Registration Application shall be signed below by a Responsible Official. A Responsible Official is a President, Vice President, Secretary, Treasurer, General Partner, General Manager, a member of a Board of Directors, or Owner, depending on business structure. A business may certify an Authorized Representative who shall have authority to bind the Corporation, Partnership, Limited Liability Company, Association, Joint Venture or Sole Proprietorship. Required records of daily throughput, hours of operation and maintenance, general correspondence, Emission Inventory, Certified Emission Statement, compliance certifications and all required notifications must be signed by a Responsible Official or an Authorized Representative. If a business wishes to certify an Authorized Representative, the official agreement below shall be checked off and the appropriate names and signatures entered. Any administratively incomplete or improperly signed or unsigned Registration Application will be returned to the applicant.

FOR A CORPORATION (domestic or foreign)

☐ I certify that I am a President, Vice President, Secretary, Treasurer or in charge of a principal business function of the corporation.

FOR A PARTNERSHIP

☐ I certify that I am a General Partner.

FOR A LIMITED LIABILITY COMPANY

☒ I certify that I am a General Partner or General Manager.

FOR AN ASSOCIATION

☐ I certify that I am the President or a member of the Board of Directors.

FOR A JOINT VENTURE

☐ I certify that I am the President, General Partner or General Manager.

FOR A SOLE PROPRIETORSHIP

☐ I certify that I am the Owner and Proprietor.

☐ I hereby certify that (please print or type) _____ is an Authorized Representative and in that capacity shall represent the interest of the business (e.g., Corporation, Partnership, Limited Liability Company, Association, Joint Venture or Sole Proprietorship) and may obligate and legally bind the business. If the business changes its Authorized Representative, a Responsible Official shall notify the Director of the Office of Air Quality immediately, and/or

I hereby certify that all information contained in this General Permit Registration Application and any supporting documents appended hereto is, to the best of my knowledge, true, accurate and complete, and that all reasonable efforts have been made to provide the most comprehensive information possible.

Signature _____

(please use blue ink)

Responsible Official

11/07/2016

Date

Name & Title Roy A. Eller, Managing Member

(please print or type)

Signature _____

(please use blue ink)

Authorized Representative (if applicable)

Date

Applicant's Name Patriot Ready Mixed Concrete, LLC

Phone & Fax 703-997-8941

Phone

703-922-2195

Fax

Email roy.eller@patriotreadymix.com

Natalie E. Tennant
West Virginia Secretary of State
1900 Kanawha Blvd. East
Bldg. 1, Suite 157-K
Charleston, WV 25305

FILED

OCT 31 2016

IN THE OFFICE OF
SECRETARY OF STATE



Penney Barker, Manager
Business & Licensing Division
Tel: (304)558-8000
Fax: (304)558-8381
Website: www.wvsos.com
E-mail: business@wvsos.com

Office Hours: Monday - Friday
8:30 a.m. - 5:00 p.m. EST

FILE ONE ORIGINAL

(Two if you want a filed stamped
copy returned to you.)

**WEST VIRGINIA APPLICATION FOR
CERTIFICATE OF AUTHORITY OF
LIMITED LIABILITY COMPANY**

FILING FEE: \$150

* Fee Waived for Veteran-owned organization

Control # 9AG8I

*** The undersigned, having authority to transact business on behalf of a foreign (out-of-state) registered entity, agrees to ***
comply with the requirements of West Virginia Code §31B-10-1002 to apply for Certificate of Authority.

1. The name of the limited liability company as
registered in its home state is:

Patriot Ready Mixed Concrete, LLC.

and the State or Country of organization is:

Virginia

☒ **CHECK HERE** to indicate you have obtained and submitted with this application a **CERTIFICATE OF EXISTENCE (GOOD STANDING)**, dated during the current tax year, from your home state of original formation as required to process your application. The certificate may be obtained by contacting the Secretary of State's Office in the home state of original formation.

2. The business name to be used in West Virginia will be: [The name must contain one of the required terms such as "limited liability company" or abbreviations such as "LLC" or "PLLC." See instructions for complete list of acceptable terms and requirements for use of Trade Name.]

☒ **Home State name as listed in Section 1. above**, if available in West Virginia
(If name is not available, check **DBA Name** box below and follow special instructions in Section 2. attached.)

☐ **DBA Name**

(See special instructions in Section 2. regarding the **Letter of Resolution** attached to this application. Click here to see a sample Letter of Resolution.)

3. The company will be a: [See instructions for limitations on professions which may form PLLC in WV. All members must have WV professional license. See (*) note at the right.]

☒ **regular LLC**

☐ **Professional LLC*** for the profession of: _____

* In most cases, a **Letter of Authorization/Approval** from the appropriate State Licensing Board is required to process the application. See attached instructions.

4. The address of the principal office
of the company will be:

Street: 6202-A Old Franciscan Road
City: Alexandria State: RECEIVED Zip Code: 22310

County: Fairfax ☒

Street: _____

City: _____ State: _____ Zip Code: _____

Street: _____

City: _____ State: _____ Zip Code: _____

County: _____ ☐

Located in the County of (required):

The mailing address of the above
location, if different, will be:

5. The address of the initial designated
(physical) office of the company in
West Virginia, if any, will be:

Located in the County of:

WEST VIRGINIA APPLICATION FOR CERTIFICATE OF AUTHORITY OF LIMITED LIABILITY COMPANY

Page 2

5. (Continued from previous page...)

The mailing address of the above location, if different, will be:

Street: _____
City: _____ State: _____ Zip Code: _____

6. Agent of Process:
may be sent, if any, will be:

Name: _____
Street: _____
City: _____ State: _____ Zip Code: _____

7. E-mail address where business correspondence may be received: roy.ellor@patriotreadymix.com

8. Website address of the business, if any (ex: yourdomainname.com): www.patriotreadymix.com

9. Do you own or operate more than one business in West Virginia? ☐ Yes * Answer a. and b. below. ☒ No ☐ Decline to answer

If "Yes"... a. How many businesses? _____ b. Located in how many West Virginia counties? _____

10. The company is:
(required) ☒ an AT-WILL company, conducting business for an indefinite period.
☐ a TERM company, conducting business for the term of _____ years.

11. The company is:
(required) ☒ MEMBER-MANAGED [List the names and addresses of all members below.]
☐ MANAGER-MANAGED [List the names and addresses of all managers below.]

List the name(s) and address(es) of the Member(s)/Manager(s) of the company (required; attach additional pages if necessary).

Name	No. & Street Address	City	State	Zip Code
Roy Ellor	5901 Norham Dr.	Alexandria	VA	22315

12. All or specified members of a limited liability company are liable in their capacity as members for all or specified debts, obligations or liabilities of the company (required): ☒ No - All debts, obligations and liabilities are those of the company.
☐ Yes - Those persons who are liable in their capacity as members for all debts, obligations or liability of the company have consented in writing to the adoption of the provision or to be bound by the provision.

13. The purpose(s) for which this limited liability company is formed is as follows:
[Describe the type(s) of business activity which will be conducted, for example, "real estate," "construction of residential and commercial buildings," "commercial painting," "professional practice of law" (see Section 2. for acceptable "professional" business activities). Purpose may conclude with words "...including the transaction of any or all lawful business for which corporations may be incorporated in West Virginia"]

CONSTRUCTION OF A COMMERCIAL PROJECT, INCLUDING MANUFACTURING PLANT AND DISTRIBUTION FACILITY

14. Is the business a Scrap Metal Dealer?

☐ Yes [If "Yes," you must complete the Scrap Metal Dealer Registration Form (Form SMD-1) and proceed to Section 15.]
☒ No [Proceed to Section 15.]

WEST VIRGINIA APPLICATION FOR CERTIFICATE OF AUTHORITY OF LIMITED LIABILITY COMPANY

Page 3

15. Other provisions which may be set forth in the operating agreement or matters not inconsistent with law:
[See instructions for further information: use extra pages if necessary.]

16. The number of pages attached and included in these Articles is: 0

17. The requested effective date is:

[Requested date may not be earlier than filing nor later than 90 days after filing in our office.]

☒ the date and time of filing in the Secretary of State's Office.

☐ the following date _____ and time _____

18. Is the organization a "veteran-owned" organization?

Effective **JULY 1, 2015**, to meet the requirements for a "veteran-owned" organization, the entity filing the registration must meet the following criteria per West Virginia Code §59-1-2a:

1. A "veteran" must be honorably discharged or under honorable conditions, and
2. A "veteran-owned business" means a business that meets one of the following criteria:
 - o Is at least fifty-one percent (51%) unconditionally owned by one or more veterans, or
 - o In the case of a publicly owned business, at least fifty-one percent (51%) of the stock is unconditionally owned by one or more veterans.

☐ Yes (If "Yes," attach Form DD214) →

☐ CHECK BOX indicating you have attached Veteran Affairs Form DD214

☒ No

You may obtain a copy of your Veterans Affairs Form DD214 by contacting:

National Personnel Records Center
Military Personnel Records
 1 Archives Drive
 St. Louis, MO 63138
 Toll free: 1-86-NARA-NARA or 1-866-272-6272
 Phone: 314-801-0800
www.archives.gov/veterans/military-service-records

Per WV Code §59-1-2(j) effective July 1, 2015, the registration fee is waived for entities that meet the requirements as a "veteran-owned" organization. See attached instructions to determine if the organization qualifies for this waiver. In addition, a "veteran-owned" entity will have four (4) consecutive years of Annual Report fees waived AFTER the organization's initial formation [see WV Code §59-1-2a(m)].

19. Contact and Signature Information* (See below Important Legal Notice Regarding Signature):

a. Contact person to reach in case there is a problem with filing:

Roy Eller

Phone: 703-997-8941

b. Print or type name of signer:

Roy A. Eller

Title/Capacity of signer:

Managing Member

c. Signature:

[Signature]

Date:

10/12/16

***Important Legal Notice Regarding Signature:** Per West Virginia Code §21B-2-209, **Liability for false statement in filed record.** If a record authorized or required to be filed under this chapter contains a false statement, one who suffers loss by reliance on the statement may recover damages for the loss from a person who signed the record or caused another to sign it on the person's behalf and knew the statement to be false at the time the record was signed.

Important Note: This form is a public document. Please **do NOT** provide any personal identifiable information on this form such as social security number, bank account numbers, credit card numbers, tax identification or driver's license numbers.

Reset Form

Print Form

Commonwealth OF Virginia



State Corporation Commission

CERTIFICATE OF FACT

I Certify the Following from the Records of the Commission:

That Patriot Ready Mixed Concrete, L.L.C. is duly organized as a limited liability company under the law of the Commonwealth of Virginia;

That the date of its organization is May 24, 2006; and

That the limited liability company is in existence in the Commonwealth of Virginia as of the date set forth below.

Nothing more is hereby certified.

*Signed and Sealed at Richmond on this Date:
February 21, 2016*



Joel H. Peck

Joel H. Peck, Clerk of the Commission

State of West Virginia



Certificate

*I, Natalie E. Tennant, Secretary of State of the
State of West Virginia, hereby certify that*

PATRIOT READY MIXED CONCRETE, L.L.C.

Control Number: 9AG81

a limited liability company, organized under the laws of the State of Virginia
has filed its "Application for Certificate of Authority" in my office according to the provisions
of West Virginia Code §31B-10-1002. I hereby declare the organization to be registered as a
foreign limited liability company from its effective date of October 31, 2016, until a certificate
of cancellation is filed with our office.

Therefore, I hereby issue this

CERTIFICATE OF AUTHORITY OF A FOREIGN LIMITED LIABILITY COMPANY

to the limited liability company authorizing it to transact business in West Virginia



*Given under my hand and the
Great Seal of the State of
West Virginia on this day of
October 31, 2016*

Natalie E. Tennant

Secretary of State

PATRIOT READY MIX PROCESS DESCRIPTION

After initial plant setup:

- 1) Aggregate and sand are delivered via dump truck and unloaded into enclosed stockpile areas (E3-1 & E3-2). To minimize fugitive emissions aggregate stockpile area and dump truck unloading area are to be sprayed, as needed with water, using sprinkler (WS-1). Dump truck haul roads are to be sprayed, as needed with water, using sprinklers (WS-3, WS-4, WS-5).
- 2) Cement and flyash are delivered via truck and pneumatically unloaded into enclosed storage silos (BS-1 & BS-2). To minimize fugitive emissions, a central dust collector (APCD-1) is connected, via flexible ducting to both storage bins. Cement and flyash truck unloading area is to be sprayed, as needed with water, using sprinkler (WS-3). Haul roads for cement and flyash deliveries are to be sprayed, as needed with water, from sprinklers (WS-3, WS-4, WS-5)
- 3) Water tank (T-3) is filled from available water source
- 4) Admixtures are delivered

After all constituents are delivered and stockpiled:

- 1) Aggregate and sand are loaded into the plant via wheel loader. To minimize fugitive emissions wheel loader work area is to be sprayed, as needed with water, using sprinkler (WS-2).
- 2) Water is heated (if needed) using 1.4 mil. BTU #2 fuel fired boiler

Once the plant is filled and water heated

- 1) Aggregate and Sand are weighed, cumulatively, into the weigh hopper (WH-1). To minimize fugitive emissions weigh hopper (WH-1) is enclosed, additionally a minimal drop height between the storage bin and weigh hopper is used.
- 2) Cement and Flyash are weighed, cumulatively, into the weigh hopper (WH-2). To minimize fugitive emissions cement and flyash are conveyed to the weigh hopper via totally enclosed screw conveyors and weigh hopper (WH-2) is connected via flexible ducting to the dust collector (APCD-1)
- 3) Water meter is preset to the desired amount
- 4) Admixture dispensers are filled to the desired amount

As constituents are weighed or measured the plant operator confirms that the weights are correct, in the event the amounts are incorrect the plant operator will take appropriate action to ensure that the proper amount are weighed.

After all constituents are weighed, and confirmed as correct:

- 1) The plant operator begins to discharge the constituents into the mixer truck, in the proper sequence. Aggregate and sand are discharged into the truck via partially enclosed conveyor belt and cement and flyash are discharged directly from the weigh hopper (WH-2) into the mixer truck. To minimize fugitive emissions the loading hopper of the mixer truck is inside of a shroud, the shroud is connected to the dust collector (APCD-1) via rigid and flexible ducting. The loading shroud has 3 pickup points located, one each, on the left, right and rear of the mixer truck loading hopper.
- 2) The mixer truck driver will fill or refill their water tank(s) if needed, while the truck is being loaded

After the mixer truck is loaded the plant operator will confirm that all ingredients were properly loaded and the mixer truck driver will confirm that any and all loose materials are removed from the truck, before leaving the plant site and proceeding to the jobsite. To minimize fugitive dust emissions the haul roads for the mixer truck entering and leaving the plant are to be sprayed, as needed with water, from sprinklers (WS-3, WS-4, WS-5)

Throughout the day aggregate and sand may be delivered to the stockpiles, and cement and flyash may also be delivered to the storage bins. These deliveries are concurrent with the loading of mixer trucks.

PATRIOT READY MIX

DESCRIPTION OF FUGITIVE EMISSIONS

Fugitive emissions sources include those generated from the delivery and unloading of aggregate and sand, and the subsequent use of wheel loader to transfer these materials to the batch plant. All fugitive resulting from delivery and transfer by wheel loader, the fugitive emissions from these processes are minimized by the use of water sprinklers. Fugitive emissions generated from weighing the aggregate and sand is controlled by enclosing the weigh hopper for these materials.

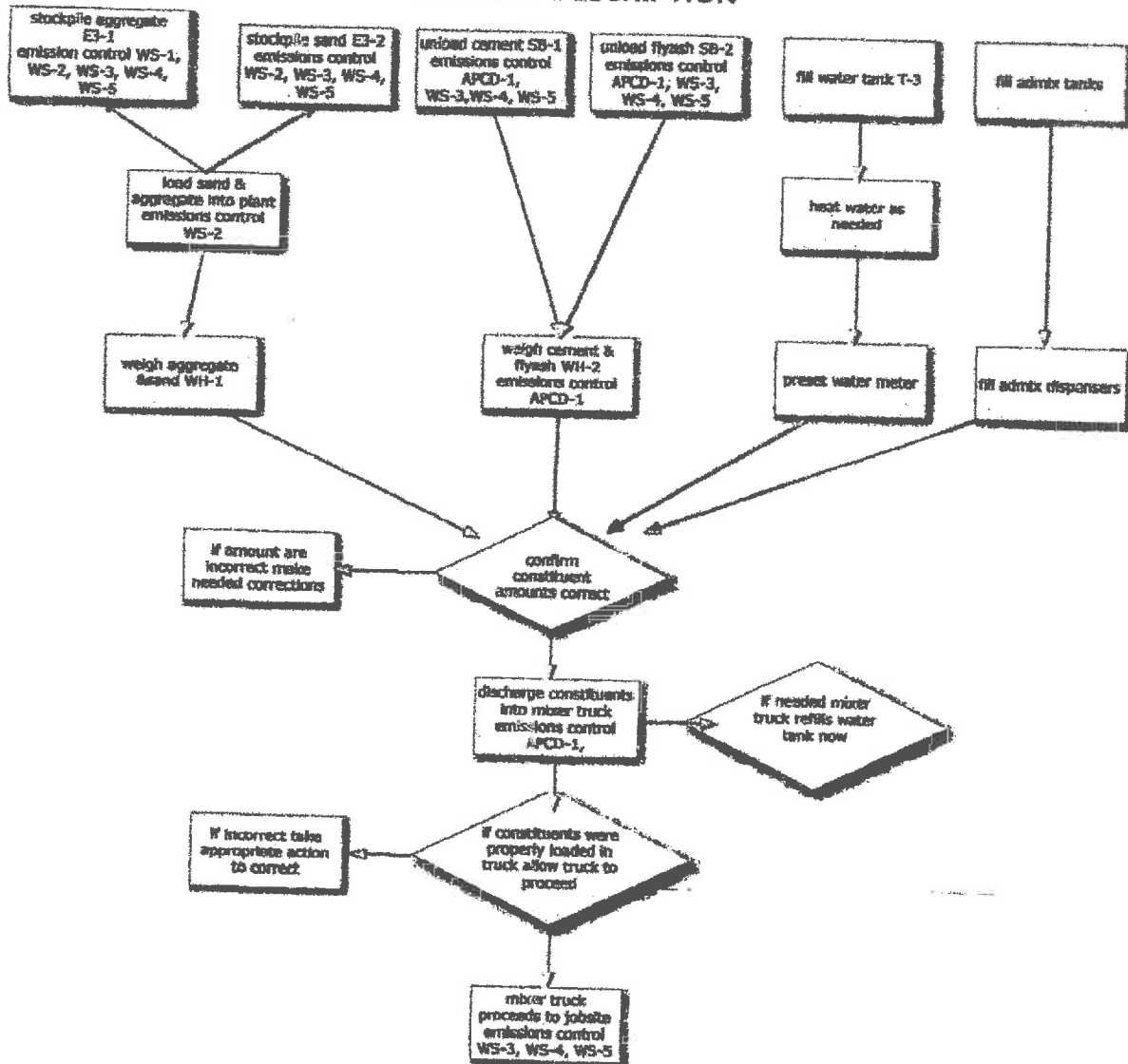
Cement and Flyash emissions are controlled by the use of a central dust collector attached to separate enclosed silos for each material; additionally the central dust collector will be used to control emission when weighing both the cement and flyash in the weigh hopper.

Fugitive emissions that are generated when the mixer truck is being loaded will be collected by the central dust collector via loading shroud.




All materials collected by the central dust collector shall be returned to the flyash silo using a totally enclosed pneumatic system, this return process is automatic and programmable to adjust for frequency of loading and unloading.

All haul roads will be of coarse gravel and fugitive emissions will be controlled by water spray, as needed, from sprinklers. The sprinklers will be supplied by two pumps supplying water at a rate of 40 gal/min. Sprinklers will be controlled individually and manually. Sprinkler heads will be removed and lines will be evacuated, using compressed air, to prevent freezing.

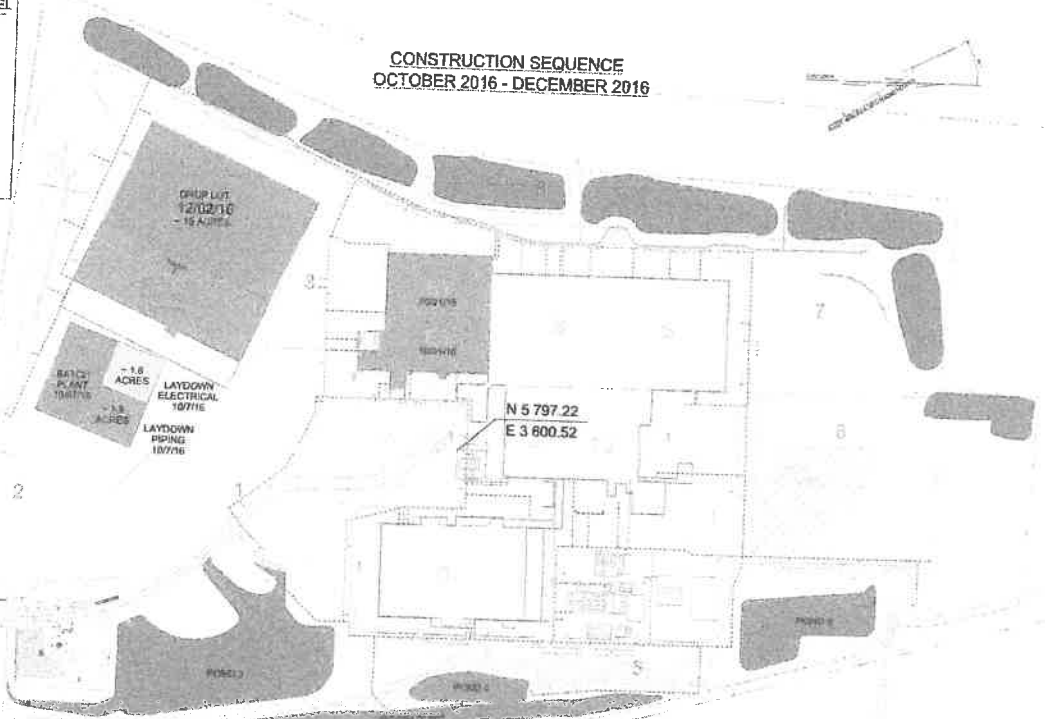
PATRIOT READY MIX PROCESS DESCRIPTION



LEGEND	PILES	FONS	STEEL
E1 = SWIFFER	-	-	-
E3 = DAFC	10/01	12/01	-
C = RESOURCE CENTER			
B = FINISHED PRODUCT SUPPLY WAREHOUSE			
A = HAND DISH WASH			
E2 = BEAUTY			
D1 = RIGIDS			
D2 = CHEMICALS			
F = FUTURE			

 EARTH WORK
COMPLETION/DATE
 PAD READY/DATE
 00/17 - 00/18 STRUCTURE/DATE
 PAD COMPLETED

CONSTRUCTION SEQUENCE OCTOBER 2016 - DECEMBER 2016



STAFFING REQUIREMENTS OCTOBER 2016 - DECEMBER 2016

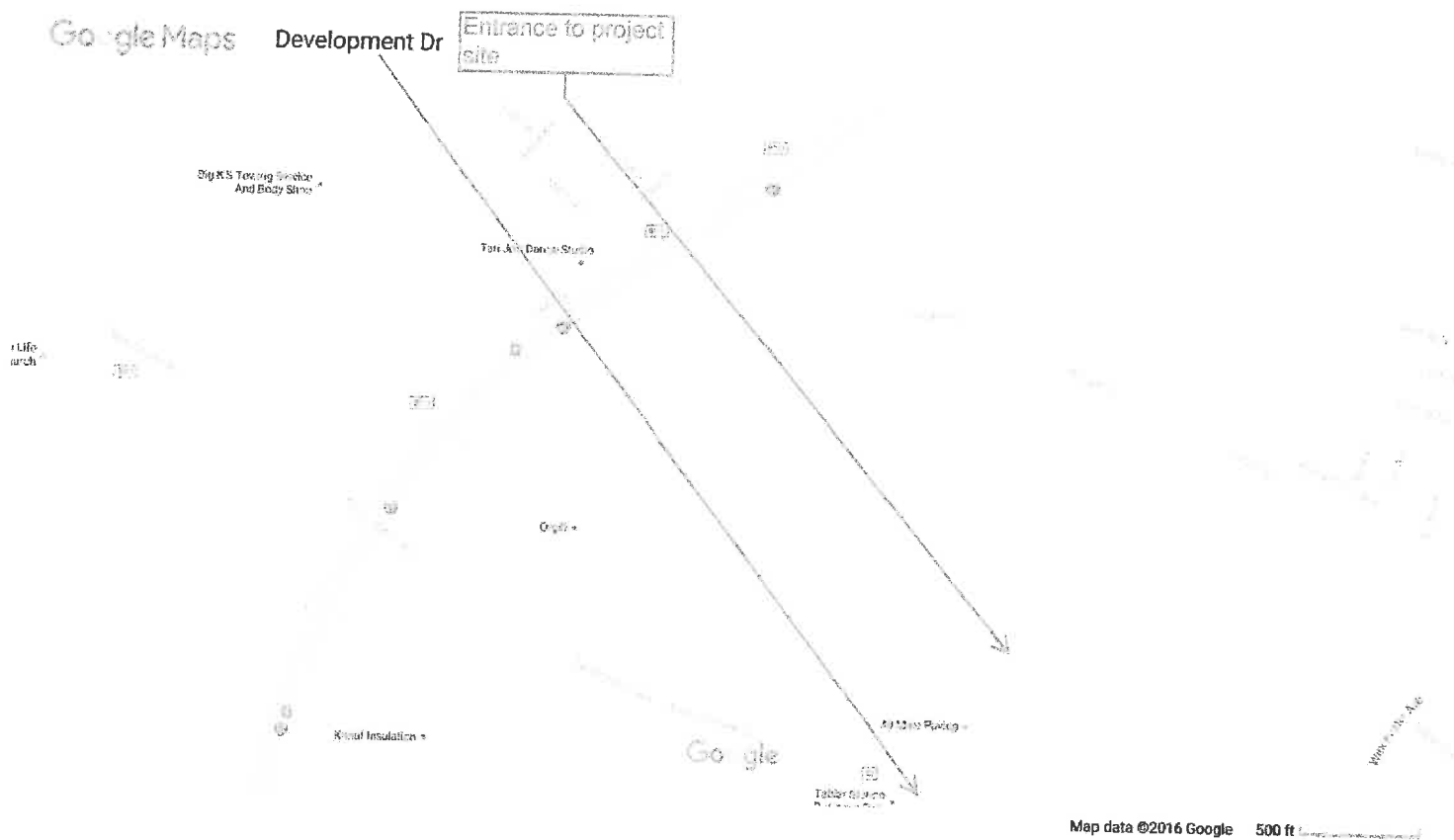
	SITE	DAFC	BEAUTY	RIGIDS	HOW	SWIFFER	SURFACTANTS	WAREHOUSE	WWT
FLUOR									
CONTRACTORS									
P&G									
VENDORS, ETC.									
P&G OPS (DAFC)									

REFERENCE DWGS

REFERENCE DWGS		SUPPLIER INFORMATION/NOTES	
		FLUOR	Project No. A7PGTL
		PROJECT INDEPENDENCE CIVIL CONSTRUCTION SEQUENCE OCTOBER 2016 - DECEMBER 2016	
Procter & Gamble		CONSTR SEQUENCE PLAN-3	

11/4/2016

Development Dr - Google Maps



11/4/2016



Development Dr - Google Maps

Development Dr
Inwood, WV 25428

CBP PRODUCTION AFFECTED SOURCE SHEET

CBP Production Information	Source Identification Number ¹	CBP-1	
	Manufacturer & Model Number	58061	
	Date of Manufacture	2015	
	Maximum Design Production Rate ²	300 tn/hr	
	Maximum Annual Production ³	750000 tn/yr	
	Daily Operation	10	hours/day
	Annual Operation	250	days/year
		2500	hours/year
	Approximate Percentage of Operation from:	15	Jan - Mar
		40	April - June
		30	July - Sept
		15	Oct - Dec

1. Enter the appropriate Source Identification Number for each concrete batch plant production weigh hopper or central mixer. Batch plant weigh hopper should be designated WH-1, WH-2, etc. Batch plant central mixer should be designated CM-1, CM-2, etc.
2. Enter the manufacturer's Maximum Design Production Rate of the concrete batch plant production equipment. Specify units in tons/hour.
3. Enter the Maximum Annual Production of the concrete batch plant. Specify units of cubic yards per year or tons per year. To calculate Maximum Annual Production, multiply the Maximum Design Production Rate (tons/hr) by the Annual Operation (hrs/yr).

CBP PARTICULATE MATTER CAPTURE SYSTEM AFFECTED SOURCE SHEET

Pursuant to Section 2.2.4 of General Permit G50-B, the registrant shall not cause, suffer, allow, or permit any registered concrete batch plant to operate that is not equipped with an effective particulate matter capture system(s) and associated air pollution control device(s) to minimize the emission of particulate matter from production equipment, storage structures and silos. The particulate matter capture system shall ensure the lowest fugitive particulate emissions reasonably achievable.

A particulate matter capture system shall be used to confine, collect, and transport displaced particulate matter from production weigh hoppers, cement and flyash storage structures and/or silos to an air pollution control device. Particulate matter capture systems may include but not be limited to: hoods, bins, ductwork, enclosures and air pollution control devices such as fabric filter baghouses, associated fans, discharge socks and filter vents.

Provide a written description of the concrete batch plant's particulate matter capture system below:

The particulate matter capture system consists of one "central" dust collector and particulate recycle system and one cement silo filter house.

The dust collector is attached to the mixer truck loading shroud and the cement scale; The shroud contains two pickup points located diagonally on the top, effectively surrounding the truck loading point. The cement scale contains one pickup point allowing the dust collector to vent the scale and collect dust while being loaded.

All particulate matter collected from the mixer truck loading area is automatically returned (pneumatically) to the fly ash storage silo (SB-2) for reuse. The rate of return and reuse is variable and can be adjusted based on the batch plants daily production.

The dust collector is equipped with a device to measure pressure drop across the filter elements and is monitored and recorded daily, and the filter elements are cleaned with a jet pulse system and are replaced whenever the pressure drop is outside of the manufacturers recommended operating parameters.

The cement silo house consists of a series of filter cartridges that contain the particulate matter created while material is pneumatically delivered to the silo. The cartridges are cleaned with a jet pulse system.

CBP MATERIAL STORAGE & HANDLING AFFECTED SOURCE SHEET

Source Identification Number ¹	ES-1	ES-2	BS-1	BS-2		
Material Stored ²	Stone	Sand	Cement	Flyash		
Maximum Yearly Throughput (tons/year) ³	346875	241875	90000	22500		
Typical Moisture Content (%) ⁴	.05%	5.0%	0	0		
Average % of Material Passing Through 200 Mesh Sieve ⁵	<1%	<2%	100	99		
Maximum Stockpile Base Area (ft ²) ⁶	1000	1000	N/A	N/A		
Maximum Stockpile Height (ft) ⁷	8	8	N/A	N/A		
Maximum Storage Capacity (tons) ⁸	350	350	75	30		
Dust Control Method Applied to Storage ⁹	WS	NO	FE	FE		
Method of Material Load-in to Bin or Stockpile ¹⁰	TD	TD	ST	ST		
Dust Control Method Applied During Load-in ¹¹	WS	NO	FE	FE		
Method of Material Load-out from Bin or Stockpile ¹⁰	FE	FE	ST	ST		
Dust Control Method Applied During Load-out ¹¹	MD	MD	FE	FE		

1. Enter the appropriate Source Identification Number for each storage activity using the following codes. For example, if the facility utilizes four open stockpiles and one storage silo, the Source Identification Numbers should be OS-1, OS-2, OS-3, and OS-4; and BS-1, respectively.

OS Open Stockpile E3 Enclosure (three-sided enclosure)
BS Bin or Storage Silo (full enclosure) SB Storage Building (full enclosure)
SF Stockpiles with wind fences OT Other _____ (please specify)

2. Describe the type of material stored or stockpiled.

3. Enter the maximum yearly storage throughput for each storage activity.

4. Enter the average percent moisture content of the stored material.

5. Enter the average percent of material that will pass through a 200 mesh sieve.

6. For stockpiles, enter the maximum stockpile base area.

7. For stockpiles, enter the maximum stockpile height.

8. Enter the maximum storage capacity for each storage activity in tons (e.g. silo capacity, maximum stockpile size, etc.).

9. Enter the dust control method applied to storage activity using the following codes:

CA Crusting Agent WS Water Spray
FE Full Enclosure NO None
OT Other _____ (please specify)

10. Enter the method of load-in or load-out to/from stockpiles or bins using the following codes:

FE Front Endloader SS Stationary Conveyor/Stacker
ST Stacking Tube MC Mobile Conveyor/Stacker
CS Clamshell TD Truck Dump
OT Other _____ (please specify)

11. Enter the dust control method applied during load-in or load-out using the following codes:

CA Crusting Agent WS Water Spray
FE Full Enclosure MD Minimize Drop Height
ST Stacking Tube NO None
OT Other _____ (please specify)

AIR POLLUTION CONTROL DEVICE AFFECTED SOURCE SHEET

CBP Air Pollution Control Device Data Sheet		Fabric Filter Baghouse	Filter Vent	Fabric Filter Discharge Sock
General Information	APCD Identification Number ¹	APCD-1		
	Manufacturer & Model Number	C&W CP7500M		
	Number of Compartments	1		
	Gas Inlet Area (ft ²)	1.39		
	Gas Outlet Area (ft ²)	2.29		
	Fabric Filter Cleaning Mechanism ²	Pulse jet w/ timer		
	Total Cloth (fabric) Area (ft ²)	1072		
	Draft Fan HP	15		
	Outlet Stack Area (ft ²)	2.29		
Operational Parameters	Minimum Design PD (in H ₂ O)	3" or less depending on thickness of cake.		
	Maximum Design PD (in H ₂ O)	8		
	Inlet Gas Flow Rate (ACFM)	7500		
	Inlet Gas Temperature (°F)	ambient		
	Inlet Gas Pressure (PSIA)	na		
	Inlet Gas Velocity (ft/sec)	90		
	PM Inlet Rate (grains/scf)	0.73500		
	PM Outlet Rate (grains/scf)	0.000073500		
	Operating Air/Cloth Ratio (ft/min)	7		

1. Enter the appropriate Air Pollution Control Device Identification Number for each fabric filter baghouse, filter vent or discharge sock. The devices should be designated APCD-1, APCD-2, APCD-3, etc.
2. Enter method used to clean bags: shaker, pulse jet, reverse jet or other.
3. Complete more than one CBP Air Pollution Control Device Data Sheet if necessary.
4. Enter the fractional efficiency of the fabric filter baghouse.

AIR POLLUTION CONTROL DEVICE AFFECTED SOURCE SHEET

CBP Air Pollution Control Device Data Sheet		Fabric Filter Baghouse	Filter Vent	Fabric Filter Discharge Sock
General Information	APCD Identification Number ¹		APCD-2	
	Manufacturer & Model Number		Stephens SOS1020x2	
	Number of Compartments			
	Gas Inlet Area (ft ²)		Cement	
	Gas Outlet Area (ft ²)		Cement	
	Fabric Filter Cleaning Mechanism ²		Pulse Air	
	Total Cloth (fabric) Area (ft ²)		900	
	Draft Fan HP			
	Outlet Stack Area (ft ²)			
Operational Parameters	Minimum Design PD (in H ₂ O)		0	
	Maximum Design PD (in H ₂ O)		5	
	Inlet Gas Flow Rate (ACFM)		Cement	
	Inlet Gas Temperature (°F)		Cement	
	Inlet Gas Pressure (PSIA)		Cement	
	Inlet Gas Velocity (ft/sec)		Cement	
	PM Inlet Rate (grains/scf)		3	
	PM Outlet Rate (grains/scf)		0	
	Operating Air/Cloth Ratio (ft/min)		8.5 to 1	

1. Enter the appropriate Air Pollution Control Device Identification Number for each fabric filter baghouse, filter vent or discharge sock. The devices should be designated APCD-1, APCD-2, APCD-3, etc.
2. Enter method used to clean bags: shaker, pulse jet, reverse jet or other.
3. Complete more than one CBP Air Pollution Control Device Data Sheet if necessary.
4. Enter the fractional efficiency of the fabric filter baghouse.

CBP FUGITIVE DUST CONTROL SYSTEM AFFECTED SOURCE SHEET

Fugitive Dust Control System Data	Fugitive Dust Control Method ¹	WS
	Design Water Flow Rate (gpm) ²	15GPM
	Chemical Additive ³	N/A
	Water/Additive Mix Ratio ⁴	N/A
	Amount (gal/yd) ⁵	.15
	Frequency of Application ⁶	As needed
	Haulroad Surface ⁷	Compacted Base
	Work/Storage Area Surface ⁸	85000 ft2
	Haulroad Length ⁹	600
	Number of Vehicles per day ¹⁰	30
	Number of Wheels per Vehicle ¹¹	14
	Weight of Vehicle (tons) ¹²	35

1. Enter the fugitive dust control method(s) using the following codes:
 WT Water Truck WS Fixed Water Sprays
 UW Underbody Truck Wash RS Rumble Strips
 OT Other _____ (please specify)
2. Enter the design water flow rate for the water truck or fixed water sprays in gallons per minute.
3. Enter manufacturer and type, specification or grade of chemical additive.
4. Enter the water/chemical additive mix ratio.
5. Enter the amount of water or water/chemical additive mix to be applied to haulroads, storage and work areas in gallons per square yard.
6. Enter the frequency of application of water/chemical additive mix to haulroads, storage and work areas during periods of dry weather.
7. Enter the type of haulroad, work and storage area surface (asphalt pavement, concrete, dirt, coarse gravel, reddog, etc.).
8. Enter the approximate length of haulroad(s) in miles or feet. List appropriate units.
9. Enter the maximum daily vehicle traffic (trucks per day).
10. Enter the maximum number of wheels per vehicle.
11. Enter the mean vehicle weight in tons.
12. Complete a separate HMA Plant Fugitive Dust Control System Data sheet for each fugitive dust control system.

Provide a written description of the concrete batch plant's particulate matter capture system below:

[illegible]

CBP EMISSION SUMMARY SHEET

Source	PM		PM ₁₀	
	PTE (lb/hr)	PTE (ton/yr)	PTE (lb/hr)	PTE (ton/yr)
Total Aggregate Transfer Emissions ¹	2.5416	3.1713	1.2156	1.5167
Total Sand Transfer Emissions ¹	2.0079	2.5034	0.9603	1.1973
Cement Unloading to Elevated Storage Silo (Pneumatic) ²	0.2592	0.3240	1.1656	0.2070
Pneumatic Cement Additive Unloading to Silo ²	0.0648	0.0810	0.0414	0.0518
Weigh Hopper Loading ³	0.3240	0.4050	0.2070	0.2588
Mixer Loading (Central) ³	N/A	N/A	N/A	N/A
Truck Mix Loading ³	0.3240	0.4050	0.2070	0.2588
Paved Haulroads ⁴	N/A	N/A	N/A	N/A
Unpaved Haulroads ⁴	1.48	3.03	0.66	1.36
Wind Erosion from Storage Piles ⁵	0.01	0.06	0.01	0.03
Total	7.01	5.88	7.56	4.88

1. Enter the potential to emit of PM and PM₁₀ associated with the transfer of sand and aggregate from stockpiles to elevated bins. Use appropriate emission factors and/or equations from the CBP Emission Factor Sheet. Emission calculations may also be determined using spreadsheet G50ECALC.

2. Enter the potential to emit of PM and PM₁₀ associated with the pneumatic transfer of cement and cement additive to storage structures or silos. Use appropriate emission factors and/or equations from the CBP Emission Factor Sheet. Emission calculations may also be determined using spreadsheet G50ECALC.

3. Enter the potential to emit of PM and PM₁₀ associated with loading of weigh hopper(s), central mixer and trucks. Use appropriate emission factors and/or equations from the CBP Emission Factor Sheet. Emission calculations may also be determined using spreadsheet G50ECALC.

4. Enter the potential to emit of PM and PM₁₀ associated with vehicle activity on paved or unpaved haulroad(s). Use appropriate emission factors and/or equations from the CBP Emission Factor Sheet. Emission calculations may also be determined using spreadsheet G50ECALC.

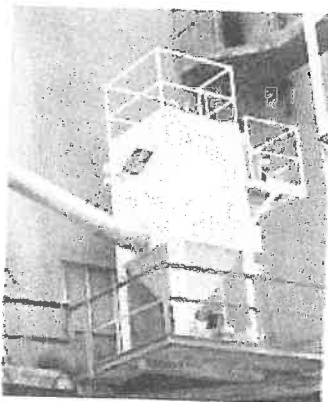
5. Enter the potential to emit of PM and PM₁₀ associated with wind erosion from sand and aggregate stockpiles. Use appropriate emission factors and/or equations from the CBP Emission Factor Sheet. Emission calculations may also be determined using spreadsheet G50ECALC.

6. Attach all potential emission calculations/spreadsheet output to this CBP Emission Summary Sheet.

C&W Manufacturing and Sales, Co.
P.O. Box 908
Crowley, TX 76036

6933 Shelmor Rd
Alvarado, TX 76009

Phone: 817.783.5000 • Fax: 817.783.2353
Email: info@cwmfg.com • Website: www.cwmfg.com



Item # CP-7500, Cartridge Pulse Central Dust Collector

C&W Manufacturing offers this high-efficiency line of collectors with the latest technology in cartridges. This series also boasts high performance: increased CFM coupled with an advanced cleaning system creating the most efficient cleaning of filter media on the market today.

The CP Series was engineered by dust control experts with careful attention to user friendliness, efficiency and ease of maintenance. Save time during installation, we offer snap together ducting packages

Specifications

Blower Performance	7,500 cfm
Total Filtration Area	1654 ft ²
Blower Power	15 hp
Air to Cloth Ratio	4.53 acfm/ft ²
No. of Cartridges	16
Cartridge Diameter	8 in
Cartridge Length	78 in
Type of Media	Spun Bound Polyester
Normal Air Capacity	7,500 cfm
Static Pressure Drop	8 inWc
Minimum Design Efficiency (At Standard Test Condition)	99.99 %
Cleaning Mechanism	Pulse Jet with Timer
	Easy to Maintain
	Efficiency
	Long-Lasting, Durable
	Performance
	Reliable, Easy to Operate
	Safety, OSHA-Compliant
	10 Gauge, Corrugated Steel Construction
	99.99% Filtration Efficiency
	Electrical Control Panel
	Ladders, Platforms, and Handrails
	Laser Aligned Cleaning System
	Magnehelic Gauge
	Solid State Adjustable Timers w/ LED Display
	Spun Bound Polyester
	Tool-less Exchange of Filter Media
	Top Entry for Clean Side Filter Exchange
	Customized Layouts

Benefits

Features

Additional Services

Professional Consultation
Start-up, Maintenance & Training
Turn-Key & Supervised Installations

Options

Custom or Standard Duct Packages
Custom Shrouds and Snorkels
Manual or Automatic Recycle Systems
Silo Anti-Overfill System
Spare Parts Kit

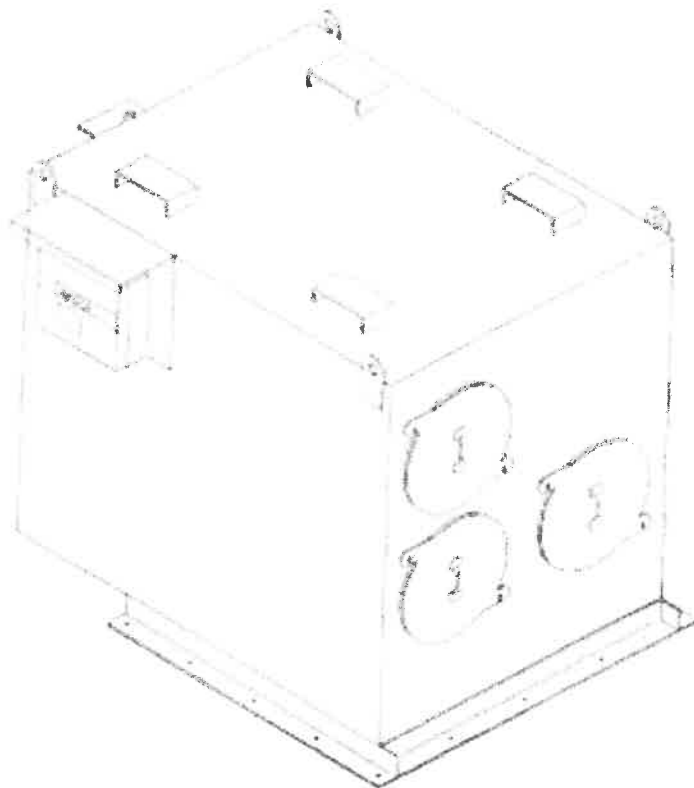
Stephens

Zone

Super-flow

CARTRIDGE DUST COLLECTORS

TECHNICAL, INSTALLATION, OPERATION, AND MAINTENANCE MANUAL



STEPHENS MFG. CO
711 WEST 4TH STREET
P.O. BOX 488
TOMPKINSVILLE, KY 42167
800-626-0200

REF: CARTRIDGE FILTER

PART NUMBER: 1004435

DIMENSIONS: 13.885 x 36.00 150 SQ. FOOT OF CLOTH

SPECIFICATIONS

STYLE: ECO 23W PLEATED MEDIA

FIBER: 100% POLYESTER

MEDIA PERMEABILITY: 99.995% AT 1 MICRON AND ABOVE

AIR PERMEABILITY: 28 CFM @ 1" DELTA P

THERMAL STABILITY: 2% MAXIMUM AT 250 DEGREE F

MOISTURE TOLERANT: CAN BE WASHED AND REUSED

MAX. OPERATING TEMP: 200 DEG. F (HIGHER TEMP. RATING CONSTR.
AVAILABLE UP TO 235)

CHEMICAL RESISTANCE

ACIDS: FAIR

ALKALIS: GOOD

OXIDIZING AGENTS: GOOD

ORGANIC SOLVENTS: GOOD

HYDROLYSIS: FAIR

ABRASION: GOOD

FABRIC CHARACTERISTICS

USING 3 GRAINS PER CUBIC FOOT LOADING AT A RATION OF 85% FOR 24 HOURS
CONSTANT, THE MATERIAL AND FILTER MEDIA IS WEIGHED BEFORE AND AFTER THE
TEST AND THE RESULTS ARE AS FOLLOWS

99.5 AT .2 TO 2.0 MICRON RANGE

99.995 AT 1 MICRON AND ABOVE

STEPHENS S.O.S. CARTRIDGE DUST COLLECTORS FOR "SILOS"

GENERAL INFORMATION AND NORMAL OPERATION

THE STEPHENS OZONE SUPER FLOW PULSE-JET CARTRIDGE DUST COLLECTOR IS AN AUTOMATIC SELF-CLEANING DUST COLLECTOR

THE STEPHENS CARTRIDGE FILTER CONSISTS OF PLEATED MEDIA IN A CYLINDRICAL CONFIGURATION. THIS DESIGN ALLOWS FOR INSTALLATION AND CHANGE OUT WITH A MINIMUM EFFORT. EACH STEPHENS FILTER IS SUPPLIED WITH IT'S OWN GASKET TO INSURE A POSITIVE, AIRTIGHT SEAL. EACH TIME THE FILTER IS CHANGED.

THE FILTERS ARE INSTALLED HORIZONTALLY, AND ARE CLEANED AUTOMATICALLY IN SEQUENCE EACH TIME THE CLEANING CYCLE START BUTTON IS PUSHED, SO ONLY A PORTION OF THE FILTERS ARE OFF LINE AT ANY GIVEN TIME.

DURING NORMAL OPERATION DIRTY AIR ENTERS THE STEPHENS DUST COLLECTOR THROUGH THE INLET IN THE BOTTOM OF THE COLLECTOR AND PASSES THROUGH THE FILTER ELEMENTS. DUST IS COLLECTED ON THE OUTSIDE SURFACES OF THE ELEMENTS AND CLEAN AIR FLOWS THROUGH THE CENTER OF THE ELEMENTS INTO THE CLEAN AIR PLENUM, IN TRUE "DOWN-FLOW" FASHION WHERE IT EXITS THROUGH THE CLEAN AIR OUTLET.
SEE: PAGE 3, FIGURE 1

THE CLEANING CYCLE START BUTTON SHOULD BE PUSHED BEFORE BLOWING MATERIAL INTO THE SILO. A SOLID STATE TIMER AND SEQUENCE CONTROL BOARD AUTOMATICALLY SELECTS THE CARTRIDGE TO BE CLEANED ACTIVATING SMALL PILOT VALVES WHICH OPEN THE HIGH PRESSURE DIAPHRAGM VALVES. HIGH PRESSURE AIR PULSES ARE DIRECTED INTO THE CENTER OF THE SELECTED CARTRIDGE FOR 15 SEC. "150 MILLISECONDS" BLOWING COLLECTED DUST OFF THE FILTER ELEMENTS AND BACK DOWN INTO THE SILO. AFTER 25 SECONDS THE SEQUENCE CONTROL BOARD WILL SELECT ANOTHER CARTRIDGE TO CLEAN. AFTER ALL CARTRIDGES ARE CLEANED THE PROCESS WILL START OVER CLEANING THE FIRST CARTRIDGE AGAIN. THIS CLEANING PROCESS WILL CONTINUE FOR THE AMOUNT OF TIME SET ON THE OPT DELAY TIMER. SEE: ELECTRICAL DRAWINGS FOR TIMER LOCATION.

CAUTION: READ START-UP AND MAINTENANCE CHECK LIST BEFORE STARTING YOUR NEW STEPHENS S.O.S. SILO DUST COLLECTOR!!!

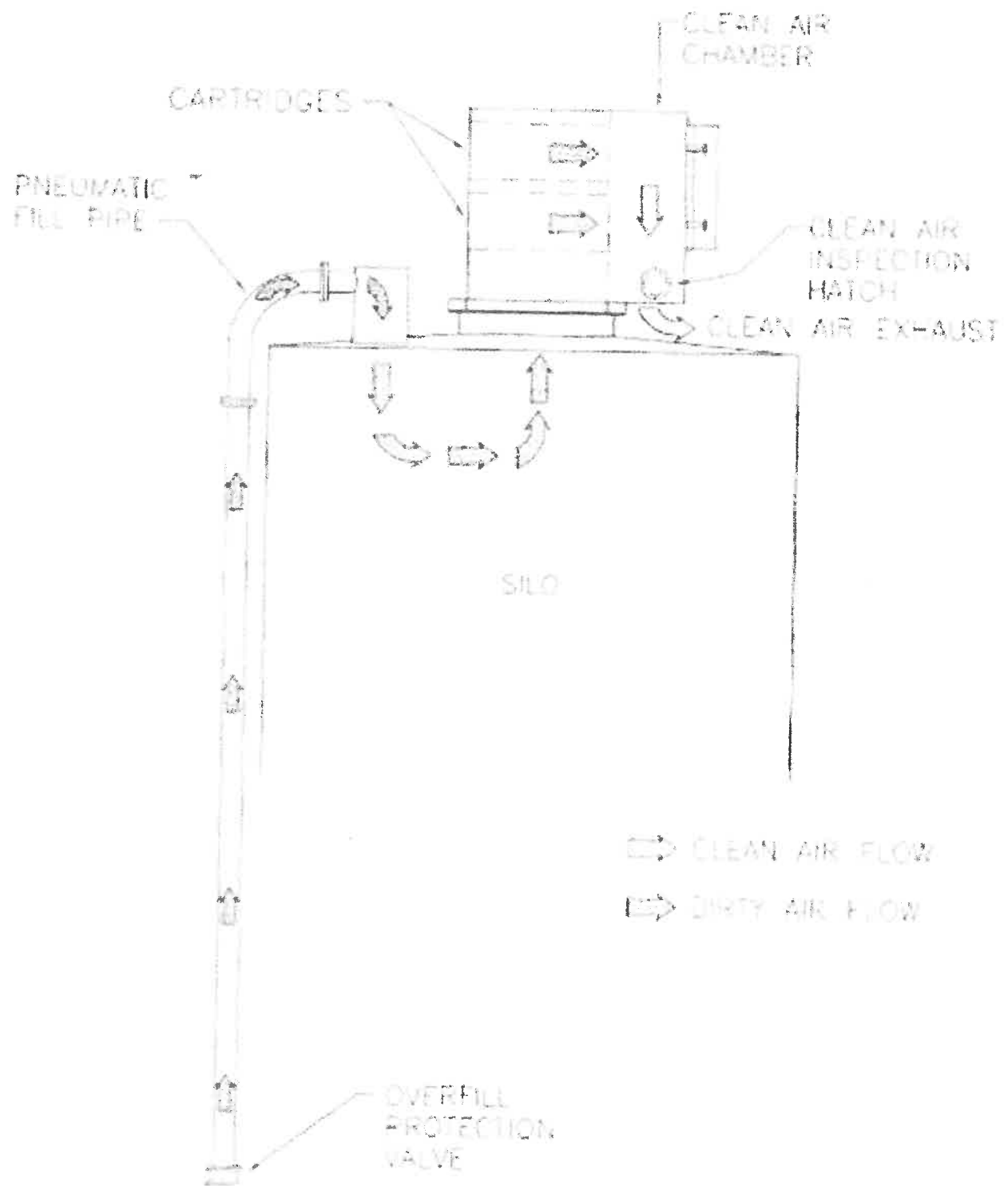


FIGURE 1

G50-B Emission Calculation Spreadsheets

For purposes of the General Permit for concrete batch plants, the following emission calculation methods will provide an adequate estimate of facility emissions from point sources and fugitive emission sources. However, where source (facility) specific tests are available, such information is preferable. Other emission factors may be acceptable provided documentation as to accuracy and appropriateness are provided by the applicant.

Completely fill out the following pages with all requested facility specific information.

Applicant Name Patriot Ready Mixed Concrete, LLC

Facility Name Independence

Please print out all pages of the completed spreadsheet and submit with Registration Application.

General Permit G50-B Emission Calculation Spreadsheet G50ECALC for Concrete Batch Plants
BATCH DROP/CONTINUOUS DROP OPERATIONS

TRANSFER POINT	TRANSFER RATE		TYPE OF	CONTROL	PM	PM-10	PM	PM-10
	TPH	TPY	CONTROL	EFFICIENCY	lb/hour	lb/hour	TPY	TPY
AGGREGATE TRANSFER EMISSIONS								
e=	0.0069 lb/ton (PM emission factor)			e=	0.0033 lb/ton (PM-10 emission factor)			
Dump truck to stockpile	139	346875	UL-WS	85	0.1439	0.0688	0.1795	0.0859
loader to stockpile	0	0	none	0	0.0000	0.0000	0.0000	0.0000
loader to feed hopper	139	346875	TC-PE	50	0.4796	0.2294	0.5984	0.2862
hopper to conveyor	139	346875	TC-PE	50	0.4796	0.2294	0.5984	0.2862
conveyor to bin	139	346875	TC-PE	50	0.4796	0.2294	0.5984	0.2862
bin to scale hopper	139	346875	TC-PE	50	0.4796	0.2294	0.5984	0.2862
conveyor to mixer truck	139	346875	TC-PE	50	0.4796	0.2294	0.5984	0.2862
TOTAL AGGREGATE TRANSFER EMISSIONS					2.5416	1.2156	3.1713	1.5167

SAND TRANSFER EMISSIONS

e=	0.0021 lb/ton (PM emission factor)			e=	0.0010 lb/ton (PM-10 emission factor)			
Dump truck to stockpile	97	241875	TC-PE	50	0.3347	0.1601	0.4172	0.1995
loader to stockpile	0	0	none	0	0.0000	0.0000	0.0000	0.0000
loader to feed hopper	97	241875	TC-PE	50	0.3347	0.1601	0.4172	0.1995
hopper to conveyor	97	241875	TC-PE	50	0.3347	0.1601	0.4172	0.1995
conveyor to bin	97	241875	TC-PE	50	0.3347	0.1601	0.4172	0.1995
bin to scale hopper	97	241875	TC-PE	50	0.3347	0.1601	0.4172	0.1995
conveyor to mixer truck	97	241875	TC-PE	50	0.3347	0.1601	0.4172	0.1995
TOTAL SAND TRANSFER EMISSIONS					2.0079	0.9603	2.5034	1.1973

BATCH DROP/CONTINUOUS DROP OPERATIONS

TRANSFER POINT	TRANSFER RATE		TYPE OF CONTROL	CONTROL EFFICIENCY	PM lb/hour	PM-10 lb/hour	PM TPY	PM-10 TPY
	TPH	TPY						
CEMENT UNLOADING TO ELEVATED STORAGE SILO (PNEUMATIC)								
e=	0.7200 lb/ton (PM emission factor)			e=	0.4600 lb/ton (PM-10 emission factor)			
truck to cement silo	36	90000	UL-BH1	99	0.2592	0.1656	0.3240	0.2070

CEMENT SUPPLEMENT UNLOADING TO ELEVATED STORAGE SILO (PNEUMATIC)

e=	3.1400 lb/ton (PM emission factor)			e=	1.1000 lb/ton (PM-10 emission factor)			
truck to cement silo	9	22500	UL-BH2	99	0.0648	0.0414	0.0810	0.0518

WEIGH HOPPER LOADING

e=	0.0051 lb/ton (PM emission factor)			e=	0.0024 lb/ton (PM-10 emission factor)			
silo to cement weigh bin	45	112500	UL-BH3	99	0.3240	0.2070	0.4050	0.2588

MIXER LOADING (CENTRAL MIX)

e=	0.2200 lb/ton (PM emission factor)			e=	0.0780 lb/ton (PM-10 emission factor)			
cement weigh bin to truck	0	0	n/a	0	0.0000	0.0000	0.0000	0.0000

TRUCK LOADING (TRUCK MIX)

e=	0.6100 lb/ton (PM emission factor)			e=	0.1500 lb/ton (PM-10 emission factor)			
cement weigh bin to truck	45	112500	UL-BH4	99	0.3240	0.2070	0.4050	0.2588

TOTAL CEMENT TRANSFER EMISSIONS

0.9720 0.6210 1.2150 0.7763

TOTAL TRANSFER EMISSIONS

5.5215 2.7969 6.8897 3.4902

UNPAVED HAULROADS - Aggregate Truck

Sand & gravel

PM EMISSIONS

k	0.8	particle size multiplier (assumed)
s	10	silt in road surface (%)
S	5	mean vehicle speed (mph)
W	40	mean vehicle weight (tons)
w	14	mean number of wheels
p	150	days of precipitation (assumed)
e	4.4284	LB/VM
TRAVEL	0.2300	VM/HOUR
TRAVEL	575.0000	VM/YR
CONTROLS	70	control efficiency (%)

EMISSIONS 0.3056 lb/hour
EMISSIONS 0.3819 TPY

PM-10 EMISSIONS

k	0.36	particle size multiplier (assumed)
s	10	silt in road surface (%)
S	5	mean vehicle speed (mph)
W	40	mean vehicle weight (tons)
w	14	mean number of wheels
p	150	days of precipitation (assumed)
e	1.9928	LB/VM
TRAVEL	0.2300	VM/HOUR
TRAVEL	575.0000	VM/YR
CONTROLS	70	control efficiency (%)

EMISSIONS 0.1375 lb/hour
EMISSIONS 0.1719 TPY

PAVED HAULROADS - Aggregate Trucks

Sand & gravel

PM EMISSIONS

k	0.082	base emission factor for particle
sL	70	road surface silt load. (g/m^2)
W		mean vehicle weight (tons)
e	0.0000	LB/VM
TRAVEL		VM/HOUR
TRAVEL		VM/YR
CONTROLS	0	control efficiency (%)

EMISSIONS 0.0000 lb/hour
EMISSIONS 0.0000 TPY

PM-10 EMISSIONS

k	0.016	particle size multiplier (assumed)
s	70	silt in road surface (%)
W		mean vehicle weight (tons)
e	0.0000	LB/VM
TRAVEL	0.0000	VM/HOUR
TRAVEL	0.0000	VM/YR
CONTROLS	0	control efficiency (%)

EMISSIONS 0.0000 lb/hour
EMISSIONS 0.0000 TPY

UNPAVED HAULROADS - Cement Tanker

PM EMISSIONS

k		0.8 particle size multiplier (assumed)
s		10 silt in road surface (%)
S		5 mean vehicle speed (mph)
W		40 mean vehicle weight (tons)
w		18 mean number of wheels
p		150 days of precipitation (assumed)
e		5.0213 LB/MT
TRAVEL		0.2300 VMT/HOUR
TRAVEL		575.0000 VMT/YR
CONTROLS		70 control efficiency (%)

EMISSIONS 0.3465 lb/hour

EMISSIONS 0.4331 TPY

PM-10 EMISSIONS

k		0.36 particle size multiplier (assumed)
s		10 silt in road surface (%)
S		5 mean vehicle speed (mph)
W		40 mean vehicle weight (tons)
w		18 mean number of wheels
p		150 days of precipitation (assumed)
e		2.2596 LB/MT
TRAVEL		0.2300 VMT/HOUR
TRAVEL		575.0000 VMT/YR
CONTROLS		70 control efficiency (%)

EMISSIONS 0.1559 lb/hour

EMISSIONS 0.1949 TPY

PAVED HAULROADS - Cement Tanker

PM EMISSIONS

k		0.082 base emission factor for particle
sL		70 road surface silt load. (g/m^2)
W		mean vehicle weight (tons)
e		0.0000 LB/MT
TRAVEL		VMT/HOUR
TRAVEL		VMT/YR
CONTROLS		0 control efficiency (%)

EMISSIONS 0.0000 lb/hour

EMISSIONS 0.0000 TPY

PM-10 EMISSIONS

k		0.016 particle size multiplier (assumed)
s		70 silt in road surface (%)
W		mean vehicle weight (tons)
e		0.0000 LB/MT
TRAVEL		0.0000 VMT/HOUR
TRAVEL		0.0000 VMT/YR
CONTROLS		0 control efficiency (%)

EMISSIONS 0.0000 lb/hour

EMISSIONS 0.0000 TPY

UNPAVED HAULROADS - Concrete Mixer

PM EMISSIONS

k		0.8 particle size multiplier (assumed)
s		10 silt in road surface (%)
S		5 mean vehicle speed (mph)
W		32 mean vehicle weight (tons)
w		10 mean number of wheels
p		150 days of precipitation (assumed)
e		3.2014 LB/VMT
TRAVEL		0.7500 VMT/HOUR
TRAVEL		1,875.0000 VMT/YR
CONTROLS		70 control efficiency (%)

EMISSIONS 0.7203 lb/hour

EMISSIONS 0.9004 TPY

PM-10 EMISSIONS

k		0.36 particle size multiplier (assumed)
s		10 silt in road surface (%)
S		5 mean vehicle speed (mph)
W		32 mean vehicle weight (tons)
w		10 mean number of wheels
p		150 days of precipitation (assumed)
e		1.4406 LB/VMT
TRAVEL		0.7500 VMT/HOUR
TRAVEL		1,875.0000 VMT/YR
CONTROLS		70 control efficiency (%)

EMISSIONS 0.3241 lb/hour

EMISSIONS 0.4052 TPY

PAVED HAULROADS - Concrete Mixer

PM EMISSIONS

k		0.082 base emission factor for particle
sL		70 road surface silt load. (g/m^2)
W		mean vehicle weight (tons)
e		0.0000 LB/VMT
TRAVEL		VMT/HOUR
TRAVEL		VMT/YR
CONTROLS		0 control efficiency (%)

EMISSIONS 0.0000 lb/hour

EMISSIONS 0.0000 TPY

PM-10 EMISSIONS

k		0.016 particle size multiplier (assumed)
s		70 silt in road surface (%)
W		mean vehicle weight (tons)
e		0.0000 LB/VMT
TRAVEL		0.0000 VMT/HOUR
TRAVEL		0.0000 VMT/YR
CONTROLS		0 control efficiency (%)

EMISSIONS 0.0000 lb/hour

EMISSIONS 0.0000 TPY

UNPAVED HAULROADS- Endloader

PM EMISSIONS

k		0.8 particle size multiplier (assumed)
s		10 silt in road surface (%)
S		5 mean vehicle speed (mph)
W		7 mean vehicle weight (tons)
w		4 mean number of wheels
p		150 days of precipitation (assumed)
e		0.6988 LB/VMT
TRAVEL	0.5000	VMT/HOUR
TRAVEL	12,500.0000	VMT/YR
CONTROLS	70	control efficiency (%)

EMISSIONS 0.1048 lb/hour

EMISSIONS 1.3102 TPY

PM-10 EMISSIONS

k		0.36 particle size multiplier (assumed)
s		10 silt in road surface (%)
S		5 mean vehicle speed (mph)
W		7 mean vehicle weight (tons)
w		4 mean number of wheels
p		150 days of precipitation (assumed)
e		0.3144 LB/VMT
TRAVEL	0.5000	VMT/HOUR
TRAVEL	12,500.0000	VMT/YR
CONTROLS	70	control efficiency (%)

EMISSIONS 0.0472 lb/hour

EMISSIONS 0.5896 TPY

STORAGE PILE- Sand

PM EMISSIONS

s	30 silt content (%)
p	150 days of precipitation (assumed)
f	15 time the wind exceeds 12 mph (%)
A	0.0200 surface area (acres)
N	1 number of storage piles
CONTROLS	50%

EMISSIONS 0.0130 lb/hour

EMISSIONS 0.0568 TPY

PM-10 EMISSIONS

s	30 silt content (%)
p	150 days of precipitation (assumed)
f	15 time the wind exceeds 12 mph (%)
A	0.0200 surface area (acres)
N	1 number of storage piles
CONTROLS	50%

EMISSIONS 0.0061 lb/hour

EMISSIONS 0.0267 TPY

STORAGE PILE- Aggregate

PM EMISSIONS

s	10 silt content (%)
p	150 days of precipitation (assumed)
f	15 time the wind exceeds 12 mph (%)
A	0.0200 surface area (acres)
N	1 number of storage piles
CONTROLS	85%

EMISSIONS 0.0013 lb/hour

EMISSIONS 0.0057 TPY

PM-10 EMISSIONS

s	10 silt content (%)
p	150 days of precipitation (assumed)
f	15 time the wind exceeds 12 mph (%)
A	0.0200 surface area (acres)
N	1 number of storage piles
CONTROLS	85%

EMISSIONS 0.0006 lb/hour

EMISSIONS 0.0027 TPY

EMISSIONS SOURCE SUMMARY

	PM EMISSIONS		PM-10 EMISSIONS	
	lb/hour	TPY	lb/hour	TPY
Point Source Emissions				
Equipment Emissions	0.00	0.00	0.00	0.00
Transfer Point Emissions	5.52	2.80	6.89	3.49
Point Source Emissions Total	5.52	2.80	6.89	3.49
Fugitive Emissions	lb/hour	TPY	lb/hour	TPY
Unpaved Haulroad Emissions	1.48	3.03	0.66	1.36
Paved Haulroad Emissions	0.00	0.00	0.00	0.00
Stockpile Emissions	0.01	0.06	0.01	0.03
Fugitive Emissions Total	1.49	3.09	0.67	1.39
FACILITY EMISSIONS TOTAL	7.01	5.88	7.56	4.88